

SPECIALTY CONTRACTING TODAY

A HEALTHY FOUNDATION FOR A NEW MEDICAL SCHOOL

When the Virginia Tech Carilion School of Medicine and Research Institute decided to build a new medical school in Roanoke, Va. they found the existing soils were too sick to provide adequate support.

The subsurface conditions consisted of a sandy clay and gravel fill to 12 ft below ground. This mix was underlain by variable alluvial soft to stiff clay, followed by cobblestone and boulders. Groundwater was encountered at 10 ft below the surface.

After considering overexcavation and deep foundations, engineering firm Froehling & Robertson Inc. selected Geopier Foundation Co.'s Impact Pier System to provide the right cure for the poor soils. The Impact system uses a specially designed mandrel-and-tamper foot that is driven into the ground using a strong static force augmented by dynamic vertical-impact energy. The system produces strong and stiff Rammed Aggregate Pier elements in thin compacted lifts. The process eliminates spoils and displaces soils laterally, densifying and reinforcing the existing soils. A total of 780 Rammed Aggregate Pier elements were installed to provide a solid foundation for this \$59-million, 208,000-sq-ft, four-story building.

The Impact system provided a quick and efficient foundation support solution, with improved soil, excellent coupling with surrounding soils and reliable settlement control with superior strength and stiffness. ■



Virginia Tech Carilion School of Medicine and Research Institute

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